OSIRIS Release Notes Version 2.5

OSIRIS has substantial improvements in Version 2.5. Changes and improvements in Version 2.4 are also included at the bottom of this list.

Kits

1. Added Yfiler Plus kit.
2. Added GenePrint 10 kit (e.g., cell line verification, etc.)
3. Added Qiagen Investigator 24plex kit
4. Introduced centralized positive controls so that any of the predefined positive controls, 9947A, 9948, DNA007, 2800M or K562 may be used with any kit without manual entry.

New Features

User Interface

1. Added ability to display multiple labels on plot peaks. Users can specify which labels are displayed, such as Allele call and RFU, or Allele call, RFU and bp.

Improved allele and artifact calling

1. Improved the sensitivity of calling peaks whose size differs by one nucleotide, such as TH01 9.3/10. This enhances the calling of minor peaks in a mixture which otherwise might not be called, even when the minor peak appears as a shoulder of the major peak.
2. Improved analysis of peaks with significant noise. Changed the handling of "Crater or Poor Morphology: Possible Critical Adenylation" artifact to ensure that it would not mark rare noisy alleles as a critical artifact instead.
3. Changed the handling of "Crater or Poor Morphology: Possible Critical Adenylation" artifact to ensure that it would not flag rare noisy allele peaks with a critical artifact instead, and changed the artifact message to "Low Signal to Noise in Peak".
4. Reduced the number ladder artifact notification on samples. Added "Reduce Ladder Artifact" lab settings that change critical artifacts to non-critical on valid ladders.
5. Improved robustness of Internal Marker/ILS analysis. Added a new lab setting that allows Users to filter shoulder peaks in the ILS. This can make the analysis more robust if samples and ladders have a very noisy Internal Marker/ILS.
6. Improved analysis of kits whose smallest significant Internal Marker/ILS peak may be complicated by comigrating primer peaks. Modified the "Ignore artifacts smaller than" Lab Setting to allow it to be set to the left of the first ILS peak selected for analysis, which allows OSIRIS to analyze alleles and artifacts to the left of the first ILS peak selected in the kit definition. This improvement makes many kits more robust, especially Minifiler, reducing the sample analysis failure rate.
7. Improved the algorithm that analyzes alleles that occur between loci to determine which locus the allele belongs to. It now takes into account two new factors: the number of unambiguous peaks in each of the two neighboring loci and whether the peak in question lies an integral number of repeats from one or both neighboring locus ladders.

Improved ladder analysis

1. Improved the GlobalFiler ladder D21S11 locus specifications to make ladder analysis more robust for both Genetic analyzer and Rapid DNA analysis platforms, so that acceptable ladders will not fail to analyze.
2. Improved the robustness of the PowerPlex 21 kit ladder D18S51 locus, to prevent rare failures of acceptable ladders.

Improved baselining

1. Improved the baselining algorithm to reduce the possibility of small deviations in the baseline when using the “Normalize Raw Data Relative to Baseline” option in the lab settings.